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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/670,419	09/26/2000	Russell N. Mirov	2070.000200	5548

7590 02/17/2004

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EXAMINER	
DU, THUAN N	

ART UNIT	PAPER NUMBER
2116	11

DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/670,419	MIROV ET AL.	
	Examiner	Art Unit	
	Thuan N. Du	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 September 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-3 are presented for examination.

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

3. The drawings were received on July 14, 2003. These drawings are accepted by the examiner.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Gasteren et al. [Van Gasteren] (U.S. Patent No. 6,243,771) in view of Hara et al. [Hara] (U.S. Patent No. 5,724,591).

6. **Regarding claim 1**, Van Gasteren teaches a method for controlling the operation of a communication channel interconnecting a plurality of components [col. 1, lines 56-63], comprising the steps of:

asserting a freeze signal (master_halt signal) to cause communications between a first and a second components (masters 22 and 26) to cease [col. 2, lines 34-39]; and

receiving a freeze acknowledge signal (master halted signal) from the first and second components indicating that communications there between have ceased [col. 2, lines 40-43].

Van Gasteren teaches that the system clock can be switched off in order to reduce power dissipation of the system when all modules are in a well defined state [col. 3, lines 54-61] but does not explicitly teach a change signal is delivered to the first and second components to cause the components to switch between a first and second clock frequency signals.

Hara teaches a method for controlling transitions between a first and second clock frequency signal in a multiprocessor system including the step of delivering a change signal (supplied clock signal) to the first and second components (processor units) to cause the components to switch between a first and second clock frequency signals [col. 5, lines 20-28; col. 6, lines 6-7].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Van Gasteren and Hara because they both teach method for reducing power consumption of a computer system. Hara's teaching of switching the components from a first operation frequency to a second operation frequency would increase the reliability of Van Gasteren's system by allowing the components to enter to a reduced power

state (low operation frequency) not only for saving power but also for reducing malfunctions caused by noise in the system [Hara, col. 5, lines 29-36].

7. **Regarding claim 2**, Van Gasteren and Hara together teach the claimed method steps. Therefore, Van Gasteren and Hara together teach the apparatus to implement the claimed method steps.

8. **Regarding claim 3**, Van Gasteren teaches an apparatus, for controlling the operation of a communication channel interconnecting a plurality of components [col. 1, lines 56-63], comprising:

a first component (M1 22) capable of receiving a freeze signal (Halt_M1) [col. 2, lines 34-39] and delivering an acknowledge signal (M1_halted) after communications therefrom have been ceased [col. 2, lines 40-43];

a second component (M2 26) capable of receiving a freeze signal (Halt_M2) [col. 2, lines 34-39] and delivering an acknowledge signal (M2_halted) after communications therefrom have been ceased [col. 2, lines 40-43]; and

a controller (cmm 20) capable of delivering the freeze signal (master_halt signal) requesting that the first and second components cease communications there between [col. 2, lines 34-39].

Van Gasteren teaches that the system clock can be switched off in order to reduce power dissipation of the system when all modules are in a well defined state (determined by the

received acknowledge signals) [col. 3, lines 54-61] but does not explicitly teach the controller capable of transitioning between a first and second clock signals.

Hara teaches an apparatus, for controlling transitions between a first and second clock signals in a multiprocessor system, comprising a controller (operation clock controller 210) capable of transitioning between a first and second clock signals [col. 5, lines 20-28] to the components.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Van Gasteren and Hara because they both teach system for reducing power consumption of a computer system. Hara's teaching of switching the operation clock signal from a first clock signal to a second clock signal would increase the reliability of Van Gasteren's system by allowing the components to enter to a reduced power state (low operation frequency of the second clock signal) not only for saving power but also for reducing malfunctions caused by noise in the system [Hara, col. 5, lines 29-36].

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan N. Du whose telephone number is (703) 308-6292. The examiner can normally be reached on Monday-Friday: 9:00 AM - 5:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on (703) 305-9717.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

The fax number for the organization is (703) 872-9306.

Thuan N. Du
February 11, 2004